CHAPTER 6 Web Typography

When you complete this chapter, you will be able to:

- Understand principles for type design on a Web site
- Use the <FONT> element
- Understand why you should use Cascading Style Sheet (CSS) instead of the <FONT> element
- Create style rules using the CSS language
- Selectively apply CSS style rules
- Specify CSS font properties and block-level space values
- Build and apply style classes

Type creates a strong recurring theme throughout a well-designed Web site. Everyone visiting your Web site is a reader and responds instinctively to words set in type. The consistent use of type provides valuable information cues to the reader, and recent innovations provide powerful tools for working with type. Until recently, Web typography meant having to use too many <FONT> tags and lots of text as graphics. Today, Cascading Style Sheets offer a potent style language, allowing you to manipulate a variety of text properties to achieve professional, effective results, all without resorting to graphics that add download time.

TYPE DESIGN PRINCIPLES

Type is a flexible medium that can express emotion, tone, and structure based on the type choices you make. You also can go overboard by using too many faces and sizes, ending up with a ransom note look characteristic of the early days of page layout programs. Just because you have 150 typefaces at your disposal does not mean you should use them all. Designing for the Web actually restricts your type choices because you must stick with fonts that your users have installed on their computers. If you specify a font that is not available, the browser substitutes the default font.

As you work with type, consider the following principles for creating an effective design:

- Choose fewer fonts and sizes
- Use available fonts
- Design for legibility
- Avoid using text as graphics

TIP

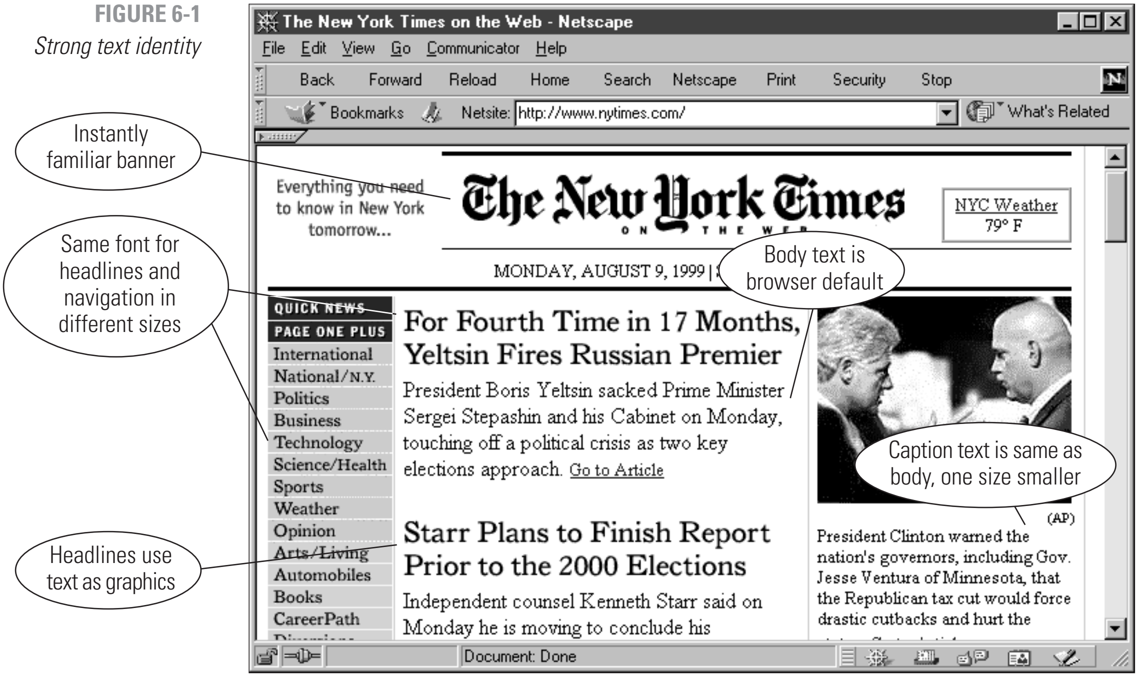
Type Terminology
In strict typography terms, a **typeface** is the name of the type, such as Times New Roman or Futura Condensed. A **font** is the typeface in a particular size, such as Times Roman 24 point. For the most part, in HTML the two terms are interchangeable.

CHOOSE FEWER FONTS AND SIZES

Your pages look cleaner when you choose fewer fonts and sizes of type. Decide on a font for each different level of topic importance, such as page headings, section headings, and body text. Communicate the hierarchy of information with changes in the size, weight, or color of the typeface. For example, a page heading should have a larger, bolder type, while a section heading would appear in the same typeface, only lighter or smaller.

Pick a few sizes and weights in a type family. For example, you might choose three sizes, such as 24 point for headings, 18 point for subheadings, and 12 point for body text. (CSS lets you specify point sizes.) You can vary these styles by changing the weight; for example, 12-point bold type can be used for topic headings within text. Consistently apply the same fonts and the same combination of styles throughout your Web site. Avoid making random changes in your use of type conventions because consistency develops a strong visual identity on your pages. *The New York Times* Web site (Figure 6-1) creates a strong visual identity by consistently using three typefaces: one for its logo, another for headings, and the browser's default typeface for body text.

FIGURE 6-1
Strong text identity



The New York Times on the Web - Netscape
File Edit View Go Communicator Help
Back Forward Reload Home Search Netscape Print Security Stop
Bookmarks Netsite: http://www.nytimes.com/ What's Related
Document: Done

Everything you need to know in New York tomorrow...

The New York Times ON THE WEB

NYC Weather 79° F

MONDAY, AUGUST 9, 1999 |

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For Fourth Time in 17 Months, Yeltsin Fires Russian Premier

President Boris Yeltsin sacked Prime Minister Sergei Stepashin and his Cabinet on Monday, touching off a political crisis as two key elections approach. Go to Article

Starr Plans to Finish Report Prior to the 2000 Elections

Independent counsel Kenneth Starr said on Monday he is moving to conclude his

(AP)

President Clinton warned the nation's governors, including Gov. Jesse Ventura of Minnesota, that the Republican tax cut would force drastic cutbacks and hurt the

Instantly familiar banner

Same font for headlines and navigation in different sizes

Headlines use text as graphics

Body text is browser default

Caption text is same as body, one size smaller

USE AVAILABLE FONTS

Fonts often are a problem in HTML because font information is client-based. The user's browser and operating system determine how a font is displayed, or if it is displayed at all. If you design your pages using a font that your user does not have installed, the browser defaults to Times on a Macintosh or Times New Roman on a PC. To make matters worse, even the most widely available fonts appear in different sizes on different operating systems. Unfortunately, the best you can do about this is to test on multiple platforms to judge the affect on your pages.

To control how text appears on your pages more effectively, think in terms of font families, such as serif and sans-serif typefaces (Figure 6-2), rather than specific styles. Because of the variable nature of fonts installed on different computers, you never can be sure the user will see the exact font you have specified. You can, however, specify font substitution attributes (described later in this chapter). These attributes let you specify a variety of fonts within a font family, such as the common sans-serif fonts, Arial or Helvetica.

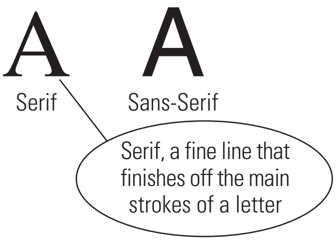

A
A
Serif
Sans-Serif
Serif, a fine line that finishes off the main strokes of a letter

FIGURE 6-2
Serif and sans-serif type

Table 6-1 lists the most common fonts on the PC, UNIX, and Macintosh systems.

TABLE 6-1
Common installed fonts

Common PC fonts	Common UNIX fonts	Common Macintosh fonts
Arial	Helvetica	Helvetica
Courier New	Times	Courier
Times New Roman		Palatino
Verdana		Times
		Verdana
		Arial

The table shows that Times (or Times New Roman) is available on all three operating systems. It is the default browser font. Courier is the default monospace font. Arial or Helvetica are the default sans-serif fonts. Arial and Verdana come with Internet Explorer 4.0 and up, so many Macintosh and PC users have these fonts installed. Some Macintosh users only have Helvetica, so it is a good idea to specify this font as an alternate choice when you are using sans-serif fonts.

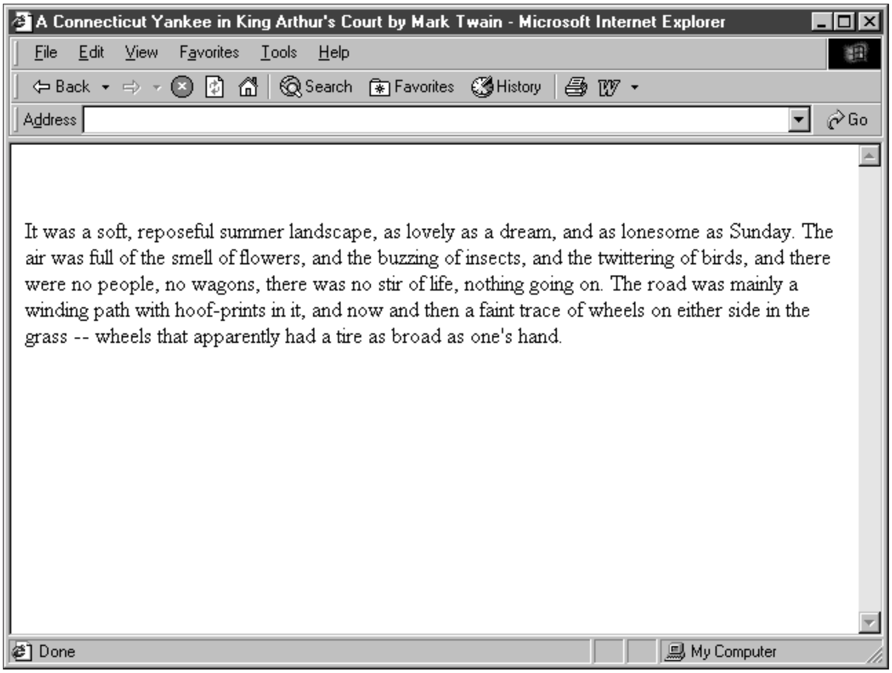
TIP

You can download a package of Web fonts from Microsoft at *www.microsoft.com/typography/fontpack/default.htm*. The core fonts package includes Arial, Verdana, and a number of other fonts designed specifically for the Web.

DESIGN FOR LEGIBILITY

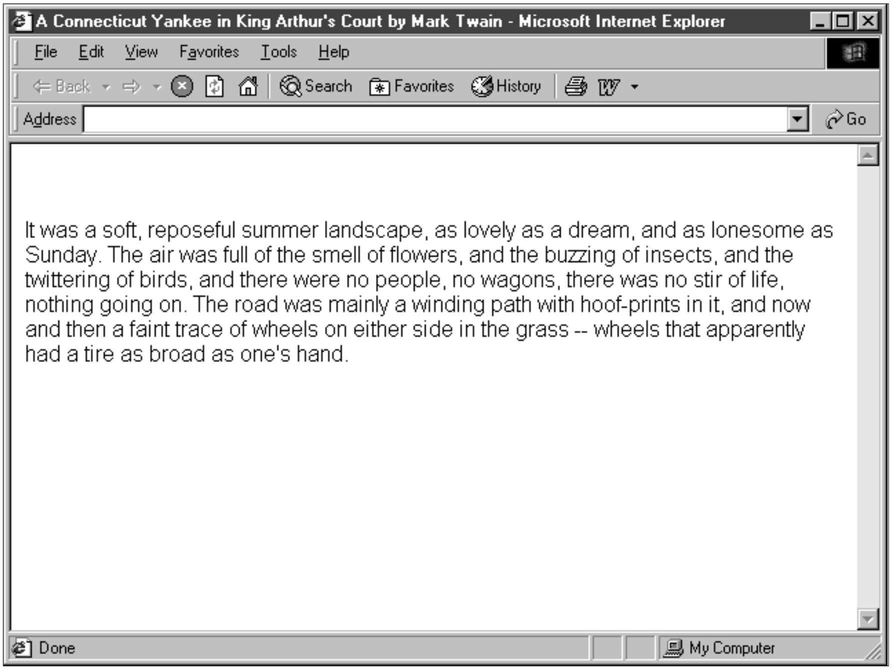
Figures 6-3 through 6-5 show the same paragraph in Times, Arial, and Verdana at the default browser size.

FIGURE 6-3
Default size Times


A Connecticut Yankee in King Arthur's Court by Mark Twain - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back
Search
Favorites
History
Address
Go
Done
My Computer

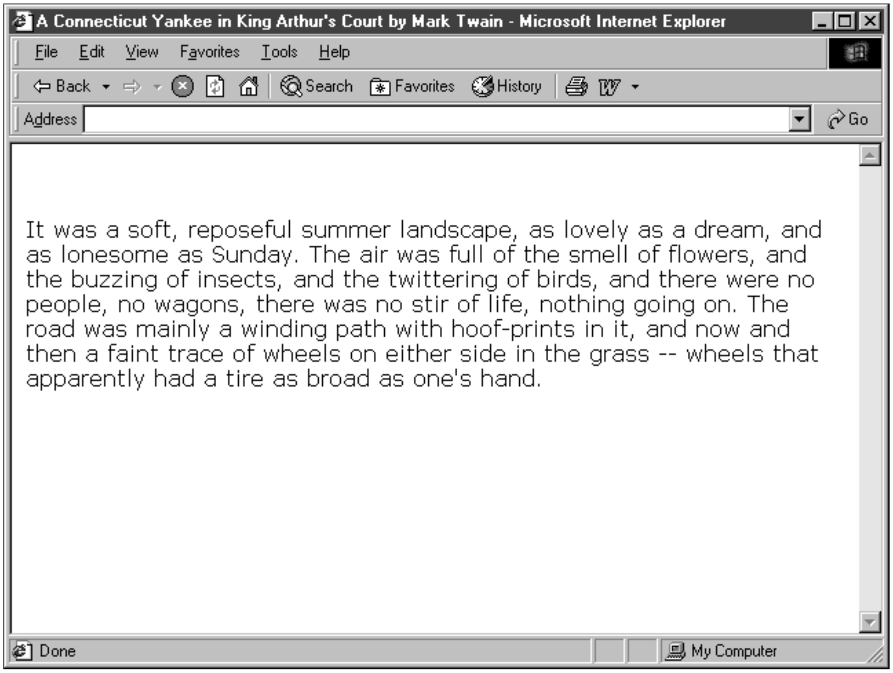
It was a soft, reposeful summer landscape, as lovely as a dream, and as lonesome as Sunday. The air was full of the smell of flowers, and the buzzing of insects, and the twittering of birds, and there were no people, no wagons, there was no stir of life, nothing going on. The road was mainly a winding path with hoof-prints in it, and now and then a faint trace of wheels on either side in the grass -- wheels that apparently had a tire as broad as one's hand.

FIGURE 6-4
Default size Arial


A Connecticut Yankee in King Arthur's Court by Mark Twain - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back
Search
Favorites
History
Address
Go
Done
My Computer

It was a soft, reposeful summer landscape, as lovely as a dream, and as lonesome as Sunday. The air was full of the smell of flowers, and the buzzing of insects, and the twittering of birds, and there were no people, no wagons, there was no stir of life, nothing going on. The road was mainly a winding path with hoof-prints in it, and now and then a faint trace of wheels on either side in the grass -- wheels that apparently had a tire as broad as one's hand.

FIGURE 6-5
Default size Verdana


A Connecticut Yankee in King Arthur's Court by Mark Twain - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back
Search
Favorites
History
Address
Go
Done
My Computer

It was a soft, reposeful summer landscape, as lovely as a dream, and as lonesome as Sunday. The air was full of the smell of flowers, and the buzzing of insects, and the twittering of birds, and there were no people, no wagons, there was no stir of life, nothing going on. The road was mainly a winding path with hoof-prints in it, and now and then a faint trace of wheels on either side in the grass -- wheels that apparently had a tire as broad as one's hand.

In these three examples, where the text wraps at the end of each line depends on the font. Because its x height (the height of the letter x in the font) is smaller than that of other fonts,Times as the default size can be hard to read, even though it is a serif typeface. Some find Arial more legible online. Verdana is an expanded font—each letter takes up more horizontal space than Arial or Times.This makes the text easier to read online, but takes much more space on the page.

The size and face of the type you use on your pages determine the legibility of your text. The computer screen has a lower resolution than the printed page, compounding the difficulty of reading online. Fonts that are legible on paper can be more difficult to read on screen. Keep fonts big enough to be legible and avoid specialty fonts that degrade when viewed online. To aid the reader, add more white space to the page around your blocks of text. Consider using more white space between lines as well.Test your content with both serif and sans-serif body text. Finally, make sure that you provide enough contrast between your text color and the background color. In general, darker text on a light background is easiest to read.

AVOID USING TEXT AS GRAPHICS

If you must use a specific font, create text as a graphic. Using Adobe Photoshop or another graphics program, create text and save it as either a GIF or JPG file. (See Chapter 7 for more information on these file formats.) This technique allows you to add drop shadows and other effects to your text. Because you also are adding download overhead with every additional graphic, however, save text graphics for important purposes, such as the main logo for your page or for reusable navigation graphics. Remember that including text as graphics means users cannot search for that text. Whenever possible, use HTML-styled text on your pages.

CONTROLLING TYPOGRAPHY WITH THE <FONT> ELEMENT

Until the addition of the <FONT> element in HTML 3.2, an HTML author could do little to control type display on a Web page. This is because HTML is intended to express document structure only, not document style. The <FONT> element, although simplistic in its control over text display, allows HTML authors to choose the font, color, and size of their type.

In the HTML 3.2 specification, the World Wide Web Consortium (W3C) cautioned that the <FONT> element may not be included in future versions of HTML. With HTML 4.0, the <FONT> element has been deprecated in favor of CSS. To ensure forward compatibility with all browsers, move to CSS and limit or replace the <FONT> element in your code. Currently, however, the <FONT> element still is widely used on the Web and supported by browsers. You can use it to set font size, font color, and to specify font substitution.

SETTING FONT SIZE

Use the SIZE attribute to set the font size. The range of sizes is one to seven, with three being the default. Size one is the smallest and size seven is the largest. The sizes are relative to the default browser size. The following code sets the font size to six:

```
<FONT SIZE=6>Some text</FONT>
```

You also can set sizes relative to the default base font using the plus (+) or minus (–) signs. Setting SIZE=+2 results in a font two sizes larger than the default (size three). The following code sets the size to six:

```
<FONT SIZE=+3>Some text</FONT>
```

This SIZE attribute expresses default size three plus three.

SPECIFYING FONT ALTERNATES

To control which fonts browsers use, you can include a list of alternate fonts, forcing the browser to look for matching fonts installed on the user’s machine. Specify alternate fonts in the <FONT> element by listing a string of fonts within quotes in the FACE attribute. For example, the following statement tells the browser to display the text in Arial. If Arial is not available, the browser attempts to use Helvetica. If neither is available, the text appears in the browser default font, usually Times New Roman.

```
<FONT SIZE=6 FACE="ARIAL, HELVETICA">some text</FONT>
```

SETTING FONT COLOR

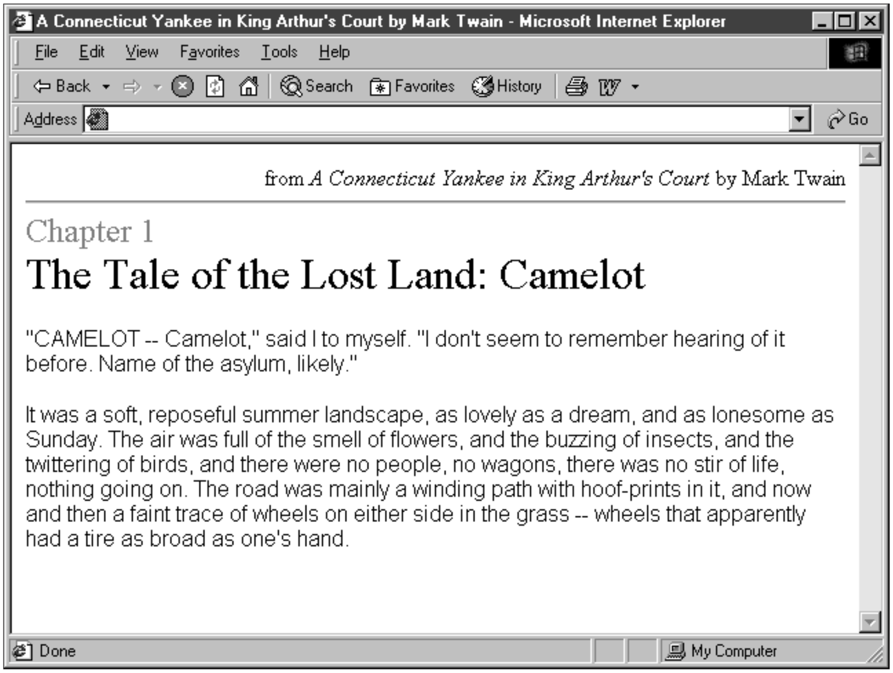
You can set font color with the COLOR attribute, using either a color name or hexadecimal color code. (See Chapter 7 for more information on hexadecimal color codes.)

```
<FONT SIZE=6 FACE="ARIAL, HELVETICA" COLOR=RED>some
text</FONT>
```

USING THE <FONT> ELEMENT

Figure 6-6 shows how the <FONT> element formats the type size, face, and color of text on the Web page.

FIGURE 6-6
Text formatted with <FONT> element



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from *A Connecticut Yankee in King Arthur's Court* by Mark Twain

Chapter 1

The Tale of the Lost Land: Camelot

"CAMELOT -- Camelot," said I to myself. "I don't seem to remember hearing of it before. Name of the asylum, likely."

It was a soft, reposeful summer landscape, as lovely as a dream, and as lonesome as Sunday. The air was full of the smell of flowers, and the buzzing of insects, and the twittering of birds, and there were no people, no wagons, there was no stir of life, nothing going on. The road was mainly a winding path with hoof-prints in it, and now and then a faint trace of wheels on either side in the grass -- wheels that apparently had a tire as broad as one's hand.

The following code shows the syntax of the <FONT> element.

```
<HTML>
<HEAD>
<TITLE> A Connecticut Yankee in King Arthur's Court by Mark Twain
</TITLE>
</HEAD>
 <BODY>

<DIV ALIGN=RIGHT>
from <I>A Connecticut Yankee in King Arthur's Court</I> by
Mark Twain</DIV>
<HR>
<FONT SIZE=5 COLOR=GRAY>Chapter 1</FONT> <BR>
```

```
<FONT SIZE=6>The Tale of the Lost Land: Camelot</FONT>
<FONT FACE=ARIAL><P>
"CAMELOT — Camelot," said I to myself. "I don't seem to
remember hearing of it before. Name of the asylum,
likely."
</P>
<P>
It was a soft, reposeful summer landscape, as lovely as
a dream, and as lonesome as Sunday. The air was full of
the smell of flowers, and the buzzing of insects, and
the twittering of birds, and there were no people, no
wagons, there was no stir of life, nothing going on. The
road was mainly a winding path with hoof-prints in it,
and now and then a faint trace of wheels on either side
in the grass — wheels that apparently had a tire as
broad as one's hand.
</P>
</FONT>
</BODY>
</HTML>
```

CONTROLLING TYPOGRAPHY WITH CASCADING STYLE SHEETS

This section acquaints you with the CSS properties that affect how type appears in the browser. This is not meant to be a complete CSS lesson, but rather a typography-oriented look at the benefits of using Cascading Style Sheets.

Cascading Style Sheets offer much greater control over type characteristics than does the <FONT> element. You can use standard type conventions, such as using point or pixel sizes, setting leading, and specifying indents and alignment. You gain more control with much less code. For example, suppose that you want every <H1> element on your Web site to be green and centered. Using the <FONT> element, you need the following code for every instance of the <H1> element:

```
<H1 ALIGN=CENTER><FONT COLOR=GREEN>The Heading</FONT></H1>
```

With Cascading Style Sheets you can express this style information once as a rule in a style sheet:

```
H1 {COLOR:GREEN; TEXT-ALIGN:CENTER}
```

This style rule affects every <H1> element on any page that uses the Cascading Style Sheet.

CSS BASICS

CSS is based on rules that select an HTML element and declare style characteristics for the element. You can state sets of rules, known as style sheets, in the head section of an HTML document or include them in a separate document known as an external style sheet. Use external style sheets to set rules when working with a number of HTML documents.

Understanding Style Rules

Style sheet rules are easy to interpret. The following style sheet shows a simple style rule for the <P> element. Note that the style rules are contained in the <STYLE> element in the document's <HEAD> section:

```
<HEAD>
<TITLE>Sample Document</TITLE>
<STYLE>
P {COLOR: BLUE; FONT-SIZE: 24pt}
</STYLE>
</HEAD>
```

This rule sets all <P> elements in the document to blue 24-point text.

Style rules are composed of two parts: a **selector** and a **declaration**. The selector determines the element to which the rule is applied. The declaration details the exact property values. Figure 6-7 is an example of a simple rule.

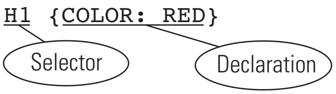


FIGURE 6-7
Style rule syntax

This rule forces the browser to display all <H1> headings in red.

The declaration contains a property and a value (Figure 6-8). The property is a quality or characteristic. The precise specification of the property is contained in the value. CSS includes over 50 properties, each with a specific number of values.

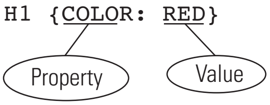


FIGURE 6-8
Property declaration syntax

You must include all CSS rules within a <STYLE> element or define them using a STYLE attribute. The <STYLE> element always is contained in the <HEAD> section. To add the above rule to an entire HTML document, use the following code in the <HEAD> section of the document:

```
<HEAD>
<TITLE>Sample Document</TITLE>
<STYLE TYPE="text/css">
H1 {COLOR: RED}
</STYLE>
</HEAD>
```

In the above code, note the TYPE attribute to the <STYLE> element. This defines the style language as Cascading Style Sheets.

Alternately, you can define the style for a single <H1> element using the STYLE attribute:

```
<H1 STYLE="COLOR: BLUE">Some Text</H1>
```

You generally would use the STYLE attribute to override a style that was set at a higher level in the document.

Linking to an External Style Sheet

Placing style sheets in an external document lets you specify rules for different HTML documents.This is an easy and powerful way to use style sheets.An external style sheet is a text document with a .CSS extension that contains the style rules. Here is an example of a simple external style sheet named style1.css:

```
/* StyleSheet #1 */
BODY {COLOR: RED}
H1 {COLOR: GREEN}
H2 {COLOR: GREEN; BORDER: SOLID BLUE}
```

Notice that the CSS comment line begins with the characters "/*" and ends with the characters "*/". The style sheet file contains no HTML code, only CSS style rules.

To link to this external style sheet, add the <LINK> element within the head section of any HTML file as shown in the following code:

```
<HEAD>
<TITLE>Sample Document</TITLE>
<LINK HREF="style1.css" REL="stylesheet">
</HEAD>
```

The file containing this code displays with the characteristics specified by the style sheet. The HREF attribute specifies the URL of the style sheet and all relative file location rules apply. The REL attribute specifies the relationship between the linked and current documents.All pages that are linked to this style sheet display the style rules.The advantage of the external style sheet is that you only have to change the style rules in one document to affect all the pages on a Web site.

TIP

Check out WebReview's CSS master list at *www.webreview.com/wr/pub/guides/style/mastergrid.html*. This site allows you to look up quickly any CSS property and check its support in a variety of browsers.

Solving Problems with Style Sheets

The main problem with style sheets is browser support. Currently Internet Explorer 5.0 is the leader in style sheet support, but still does not support the specification completely. Netscape Navigator 4.x is far behind in CSS support, but the next release promises better CSS capabilities. Strange results appear when browsers cannot interpret the rules properly. See Figures 2-1 and 2-2 for examples. Finally, older browsers will not be able to interpret your CSS rules at all. Test carefully to make sure you can live with the results if your rules are ignored.

CSS SELECTION TECHNIQUES

You must apply the style rules you build to the elements in the document. The power in CSS comes from the different methods of selecting elements. You can choose from a variety of selection methods including:

- Selecting multiple elements
- Selecting by context
- Selecting with the CLASS attribute

More complex selection involves the creation of artificial divisions, using two elements designed expressly for CSS:

- <DIV> - Block Division
- <SPAN> - Inline Division

The use of these elements, in combination with the CLASS attribute, effectively allow you to create entirely new HTML elements that are specific to your working environment. You then can use these techniques in external style sheets to apply your style properties across multiple documents in a Web site or other HTML-based application.

Selecting Multiple Elements

Using multiple selectors lets you use less code to accomplish the same results. For example, to make both <H1> and <H2> headings green, you could use the following rules:

```
<STYLE TYPE="text/css">
H1 {COLOR: GREEN}
H2 {COLOR: GREEN}
</STYLE>
```

These two rules can be expressed in a single rule statement using multiple selectors for the same property. Multiple selectors must be separated by commas:

```
<STYLE TYPE="text/css">
H1, H2 {COLOR: GREEN}
</STYLE>
```

Selecting by Context

A context-based selector lets you specify the exact context in which a style is applied. To specify that <I> elements appear blue only within <H1> elements, use the following rule:

```
<STYLE TYPE="text/css">
H1 I {COLOR: BLUE}
</STYLE>
```

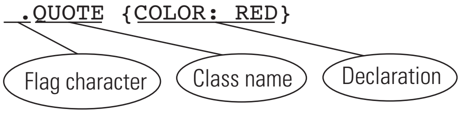
This rule states that <I> elements appear blue only when they occur within an <H1> element.

Selecting with the CLASS Attribute

The CLASS attribute lets you write rules and then apply them to groups of elements that you have classified. Basically, the CLASS attribute lets you define your own tags and then apply them anywhere you want.

To create a class, first declare it within the <STYLE> element. The period (.) flag character indicates that the selector is a class selector. Figure 6-9 is an example of a rule with a class selector.

FIGURE 6-9
Class syntax



Place this rule in the <STYLE> element:

```
<STYLE TYPE="text/css">
.QUOTE {COLOR: RED}
</STYLE>
```

Next, use the CLASS attribute in the document. In the following example, the code defines the <P> element as a special class named quote.

```
<P CLASS="QUOTE">Some text</P>
```

The selected paragraph will display the style properties of the quote class. In this example, the text color of the paragraph is red.

Working with the <DIV> Element

The <DIV> element lets you specify logical divisions within a document that have their own name and style properties. <DIV> is a block-level element that contains a leading and trailing carriage return. You can use the <DIV> element with the CLASS attribute to create customized block-level elements.

To create a division, first declare it within the <STYLE> element. The following example specifies a division named INTRO as the selector for the rule:

```
<STYLE TYPE="text/css">
DIV.INTRO {COLOR:RED}
</STYLE>
```

Next, specify the <DIV> element in the document, and then use the CLASS attribute to specify the exact type of division. In the following example, the code defines the <DIV> element as the special class named intro.

```
<DIV CLASS="INTRO">Some text</DIV>
```

Working with the <SPAN> Element

The <SPAN> element lets you specify inline elements within a document that have their own name and style properties. Place inline elements within a line of text, like the <B> or <I> elements. You can use the <SPAN> element with the CLASS attribute to create customized inline elements and apply styles more accurately.

To create a span, first declare it within the <STYLE> element. The following example specifies a <SPAN> element named Logo as the selector for the rule:

```
<STYLE TYPE="text/css">
SPAN.LOGO {COLOR:RED}
</STYLE>
```

Next, specify the <SPAN> element in the document, and then use the CLASS attribute to specify the exact type of <SPAN> element. In the following example the code defines the <SPAN> element as a special class named Logo. Note that <SPAN> is used within the line of text.

```
Welcome to the <SPAN CLASS="LOGO">Wonder Software</SPAN>
Web site.
```

CSS FONT PROPERTIES

CSS lets you control over 50 style properties. Support varies widely for these properties so always test your work carefully. The font properties you will work with most often include:

- Font families and alternates
- Font size
- Font weight
- Line height
- Letter spacing
- Text indent
- Color

Selecting a Specific Font Family and Alternates

The font family property lets you specify any font or generic font family. The users must have the font installed on their computers, otherwise the browser uses the default font. The following rule specifies Arial as the font for the <P> element:

```
<STYLE TYPE="text/css">
P {FONT-FAMILY: ARIAL}
</STYLE>
```

You can specify a list of alternate fonts by using commas as a separator. The browser attempts to load each successive font in the list. If no fonts match, the browser uses its default font. The following code tells the browser to use Arial. If Arial is not present, use Helvetica.

```
<STYLE TYPE="text/css">
P {FONT-FAMILY: ARIAL, HELVETICA}
</STYLE>
```

You can add a generic name for greater portability across browsers and operating systems. The following code tells the browser to use a sans-serif font if Arial or Helvetica are not available.

```
<STYLE TYPE="text/css">
P {FONT-FAMILY: ARIAL, HELVETICA, SANS-SERIF}
</STYLE>
```

You can use the following generic names for font families:

- Serif
- Sans-serif
- Monospace

If you do not specify any font family, the browser displays the default font.

Specifying Font Size

CSS offers a variety of measurement units. For example, to specify font size, you can use any of the measurement units shown in Table 6-2.

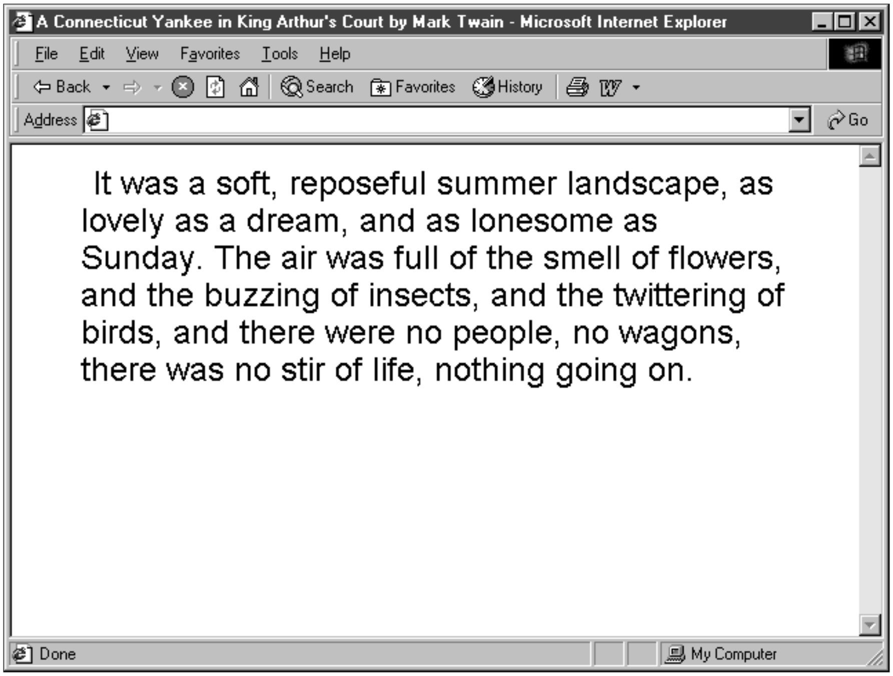
TABLE 6-2
CSS measurement units

Unit	Code Abbreviation	Description
Centimeter	cm	Standard metric centimeter
Em	em	The width of the capital M in the current font, usually the same as the font size
Ex	ex	The height of the letter x in the current font
Inch	in	Standard U.S. inch
Millimeter	mm	Standard metric millimeter
Relative		A font size relative to the base font size; for example, 150% equals one-and-one-half the base font size
Pica	pc	Standard publishing unit equal to 12 points
Pixel	px	The size of a pixel on the current screen
Point	point	Standard publishing unit, with 72 points in an inch

The following rule sets the <BLOCKQUOTE> element to 18-point Arial:

```
<STYLE TYPE="text/css">
BLOCKQUOTE {FONT-FAMILY: ARIAL; FONT-SIZE: 18pt}
</STYLE>
```

Figure 6-10 shows the results of the style rule.


A Connecticut Yankee in King Arthur's Court by Mark Twain - Microsoft Internet Explorer
File Edit View Favorites Tools Help
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It was a soft, reposeful summer landscape, as lovely as a dream, and as lonesome as Sunday. The air was full of the smell of flowers, and the buzzing of insects, and the twittering of birds, and there were no people, no wagons, there was no stir of life, nothing going on.

FIGURE 6-10
18-point Arial

TIP

To specify a size for the body text, use BODY as the selector. This rule sets the text to 14-point Arial:

```
<STYLE TYPE=
"text/css">
BODY
{FONT-FAMILY:
ARIAL; FONT-SIZE:
14pt}
</STYLE>
```

Remember to separate multiple property statements with semicolons.

Specifying Font Weight

CSS allows either a numerical or descriptive value for font weight. Commonly used descriptive values include:

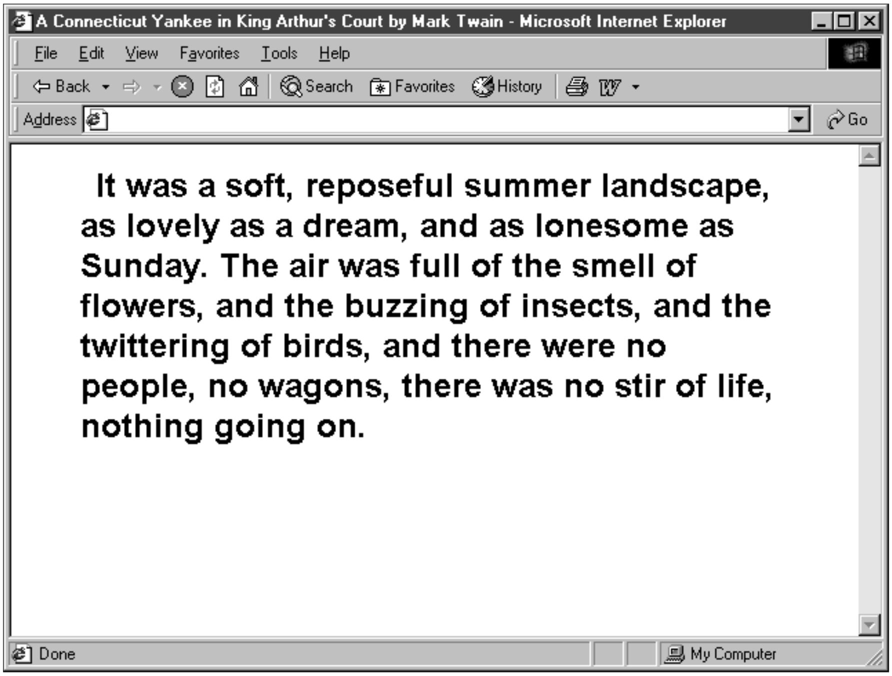
- Normal
- Bold
- Bolder
- Lighter

Test values other than bold. Not all weights are available for all typefaces. Experiment to determine what works.

The following rule shows the addition of the font weight property to the rule:

```
<STYLE TYPE="text/css">
BLOCKQUOTE {FONT-FAMILY: ARIAL; FONT-SIZE: 18pt;
FONT-WEIGHT: BOLD}
</STYLE>
```

Figure 6-11 shows the result of this rule.



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Address
Go
Done
My Computer

It was a soft, reposeful summer landscape, as lovely as a dream, and as lonesome as Sunday. The air was full of the smell of flowers, and the buzzing of insects, and the twittering of birds, and there were no people, no wagons, there was no stir of life, nothing going on.

FIGURE 6-11
18-point Arial bold

Specifying Line Height

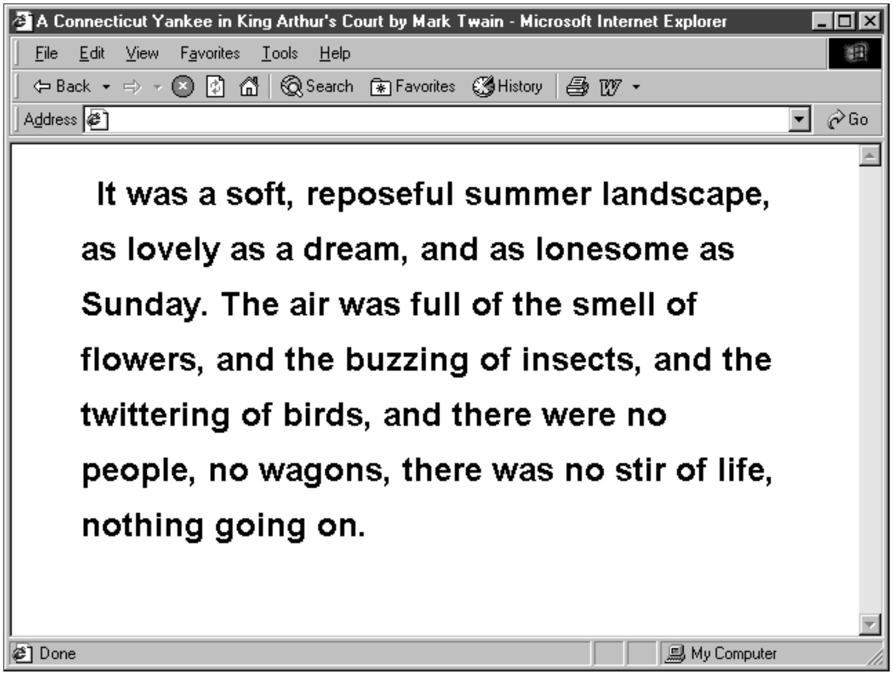
CSS allows you to specify either a percentage or absolute value for the line height, commonly called leading. The percentage is based on the font size. Setting the value to 150% with a 10-point font size results in a line height of 15 points. For absolute values, use any of the standard CSS measurement units. The following rule sets the line height to 30 points:

```
<STYLE TYPE="text/css">
BLOCKQUOTE {FONT-FAMILY: ARIAL; FONT-SIZE: 18pt;
FONT-WEIGHT: BOLD; LINE-HEIGHT: 30pt}
</STYLE>
```

Figure 6-12 shows the adjustment in line height.

FIGURE 6-12

18-point Arial bold with 30-point leading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It was a soft, reposeful summer landscape, as lovely as a dream, and as lonesome as Sunday. The air was full of the smell of flowers, and the buzzing of insects, and the twittering of birds, and there were no people, no wagons, there was no stir of life, nothing going on.

TIP

The font property is a shortcut that lets you specify the most common font properties in a single statement. You must use the following syntax in the exact order, and always include a font size:

```
Selector {FONT:
FONT-WEIGHT FONT-
SIZE/LINE-HEIGHT
FONT-FAMILY}
```

For example, you can abbreviate the following rule:

```
<STYLE
TYPE="text/css">
BODY {FONT-
WEIGHT: BOLD;
FONT-SIZE: 18pt;
LINE-HEIGHT:
30pt;
FONT-FAMILY:
ARIAL}
</STYLE>
```

to the following shorter version:

```
<STYLE
TYPE="text/css">
{FONT: BOLD
18pt/30pt ARIAL}
</STYLE>
```

Specifying Letter Spacing

Kerning is the printer's term for adjusting the white space between letters. To adjust kerning use the letter spacing property. Use any of the CSS measurement units for the value.The following rule sets the letter spacing to 2 points.

```
<STYLE TYPE="text/css">
BLOCKQUOTE {FONT-FAMILY: ARIAL; FONT-SIZE: 18pt;
FONT-WEIGHT: BOLD; LINE-HEIGHT: 30pt; LETTER-SPACING: 2pt}
</STYLE>
```

Figure 6-13 shows the 2-point spacing between letters.

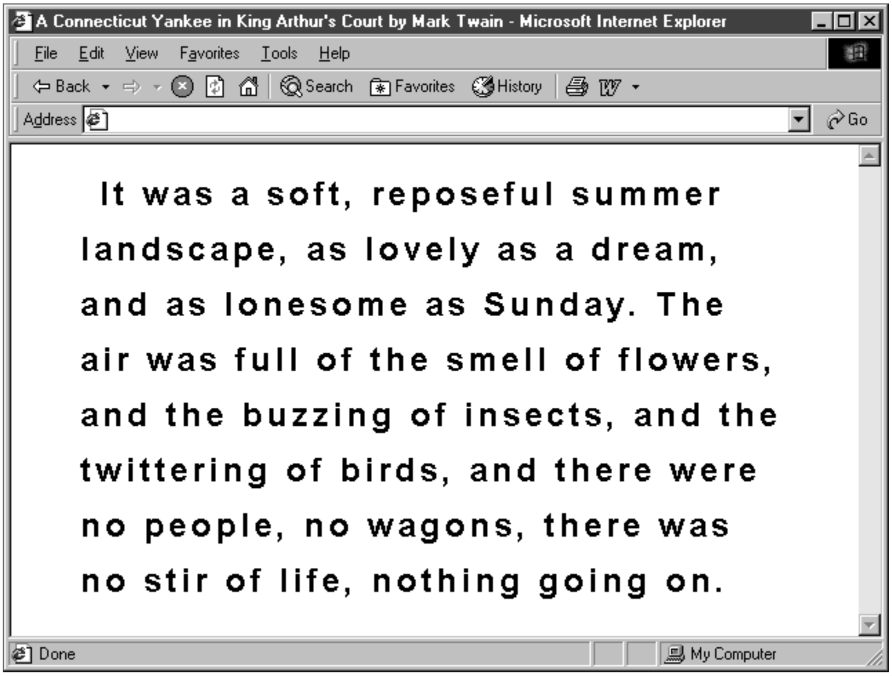
Specifying Text Indents

Use the text indent property to set the amount of indentation for the first line of text in an element, such as a paragraph. Use any of the CSS measurement units for the value. Use a negative value to set a hanging indent.The following rule sets an indent of 24 points.

```
<STYLE TYPE="text/css">
BLOCKQUOTE {FONT-FAMILY: ARIAL; FONT-SIZE: 18pt;
FONT-WEIGHT: BOLD; LINE-HEIGHT: 30pt; LETTER-
SPACING: 2pt;
TEXT-INDENT: 24pt}
</STYLE>
```

Figure 6-14 shows the result of the text indent property.

FIGURE 6-13
2 points of letter spacing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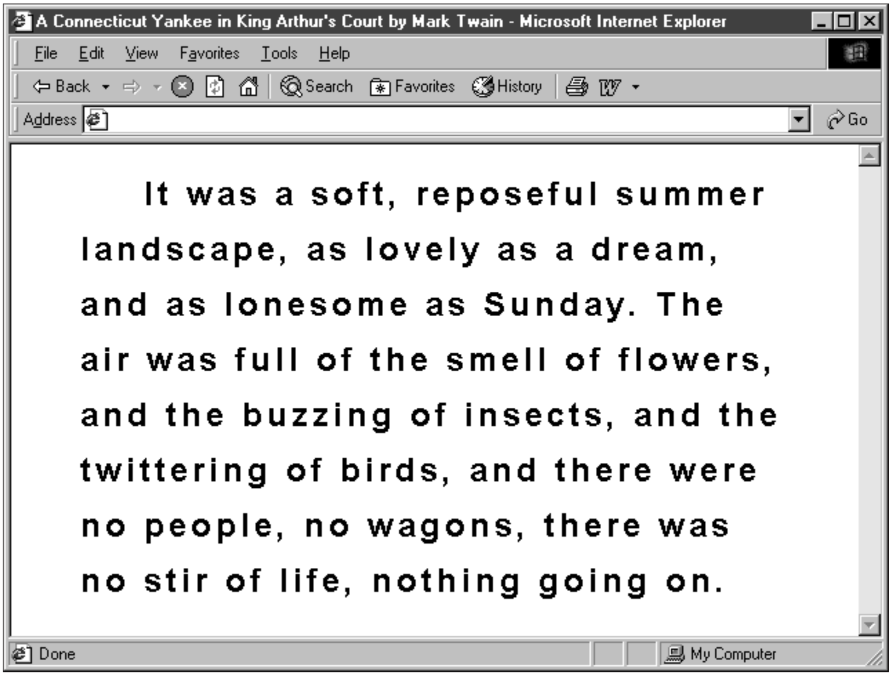
It was a soft, reposeful summer landscape, as lovely as a dream, and as lonesome as Sunday. The air was full of the smell of flowers, and the buzzing of insects, and the twittering of birds, and there were no people, no wagons, there was no stir of life, nothing going on.

FIGURE 6-14
18-point text indent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It was a soft, reposeful summer landscape, as lovely as a dream, and as lonesome as Sunday. The air was full of the smell of flowers, and the buzzing of insects, and the twittering of birds, and there were no people, no wagons, there was no stir of life, nothing going on.

TIP

You can create a hanging indent by using a negative value in the text indent property. For example, the following code creates a paragraph with a 12-point hanging indent:

```
<STYLE
TYPE="text/css">
P {TEXT-INDENT:
-12pt}
</STYLE>
```

Specifying Color

The COLOR attribute sets the color of the text in an element. You also can use the COLOR attribute to set the color of borders. You can use any one of the sixteen predefined colors, or specify a hexadecimal value. (See Chapter 7 for more information on hexadecimal color values.) The following rule sets the text color to blue:

```
<STYLE TYPE="text/css">
H1 {COLOR: BLUE}
</STYLE>
```

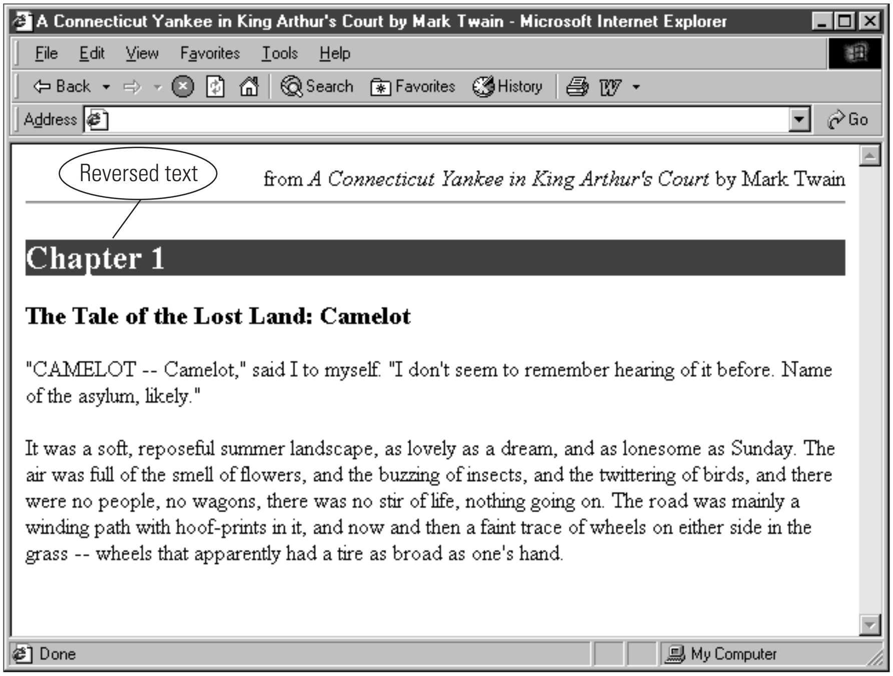
Specifying Text Background Color

You can set the background color—the color behind the text—for any element. Use the following syntax:

```
<STYLE TYPE="text/css">
H2 {COLOR: WHITE; BACKGROUND-COLOR: BLUE}
</STYLE>
```

The result of this rule is a white text on a blue background, often called a reverse in printing jargon. Figure 6-15 shows an <H2> element with this style.

FIGURE 6-15 *Reversed text—white on blue*



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Reversed text

from *A Connecticut Yankee in King Arthur's Court* by Mark Twain

Chapter 1

The Tale of the Lost Land: Camelot

"CAMELOT -- Camelot," said I to myself. "I don't seem to remember hearing of it before. Name of the asylum, likely."

It was a soft, reposeful summer landscape, as lovely as a dream, and as lonesome as Sunday. The air was full of the smell of flowers, and the buzzing of insects, and the twittering of birds, and there were no people, no wagons, there was no stir of life, nothing going on. The road was mainly a winding path with hoof-prints in it, and now and then a faint trace of wheels on either side in the grass -- wheels that apparently had a tire as broad as one's hand.

SPECIFYING BLOCK-LEVEL SPACE VALUES

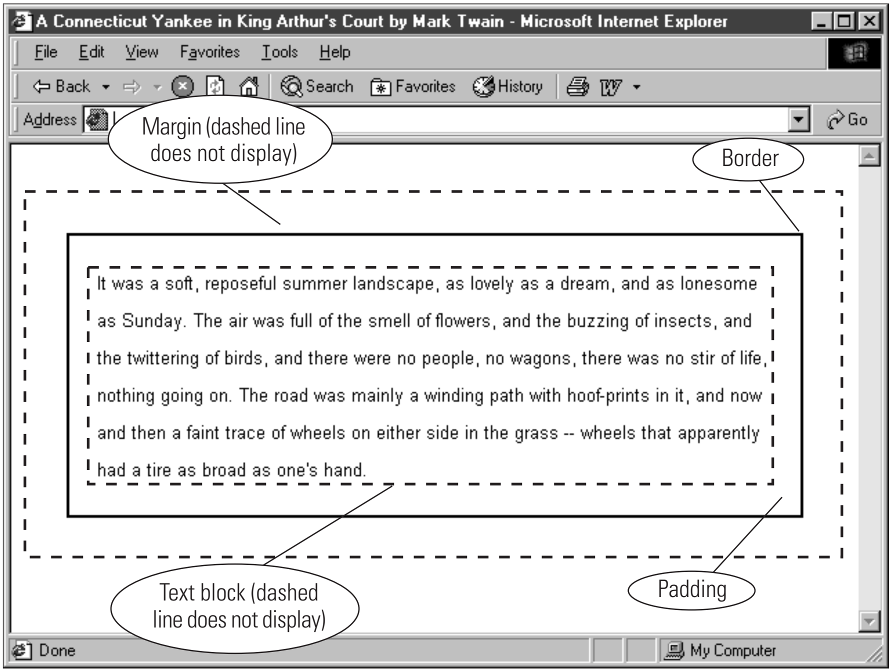
Cascading Style Sheets allow you to specify property values for the space around block-level elements. You can set the following three properties:

- Padding: The area between the text and border
- Border: The area separating the padding and margin
- Margin: The area outside the border

Figure 6-16 shows these three areas around a block-level text element.

FIGURE 6-16

White space areas around block-level elements



A Connecticut Yankee in King Arthur's Court by Mark Twain - Microsoft Internet Explorer

It was a soft, reposeful summer landscape, as lovely as a dream, and as lonesome as Sunday. The air was full of the smell of flowers, and the buzzing of insects, and the twittering of birds, and there were no people, no wagons, there was no stir of life, nothing going on. The road was mainly a winding path with hoof-prints in it, and now and then a faint trace of wheels on either side in the grass -- wheels that apparently had a tire as broad as one's hand.

Specifying Text Padding

You can specify the padding amount with any CSS measurement unit. Use the PADDING property to set the padding on all four sides, or set individual margins with the following settings:

- PADDING-TOP
- PADDING-BOTTOM
- PADDING-LEFT
- PADDING-RIGHT

The following rule sets the left and right padding to 24 points:

```
<STYLE TYPE="text/css">
P {PADDING-LEFT: 24pt; PADDING-RIGHT: 24pt}
</STYLE>
```

Specifying Text Margins

You can specify the margin amount with any CSS measurement unit. Use the MARGIN attribute to set the text margin on all four sides, or set individual margins with the following settings:

- MARGIN-TOP
- MARGIN -BOTTOM
- MARGIN -LEFT
- MARGIN -RIGHT

The following rule sets the margin to 30 pixels:

```
<STYLE TYPE="text/css">
P {MARGIN: 30px}
</STYLE>
```

Specifying Text Borders

CSS offers a wide variety of border options including width, style, and color. You can use the BORDER shortcut property to specify multiple border properties at one time. Use the following syntax:

```
{BORDER: BORDER-STYLE BORDER-WIDTH BORDER-COLOR}
```

For example, the following code sets a solid, 2-point red border around the text.

```
<STYLE TYPE="text/css">
{BORDER: SOLID 2pt RED}
</STYLE>
```

Coding Easy-to-Read Rules

To the browser, it does not matter how you space and indent your style rules, as long as the syntax is correct. Many HTML authors indent their style rules to make them easier to read and maintain. It is possible to express the following single-line style rule in a much neater fashion:

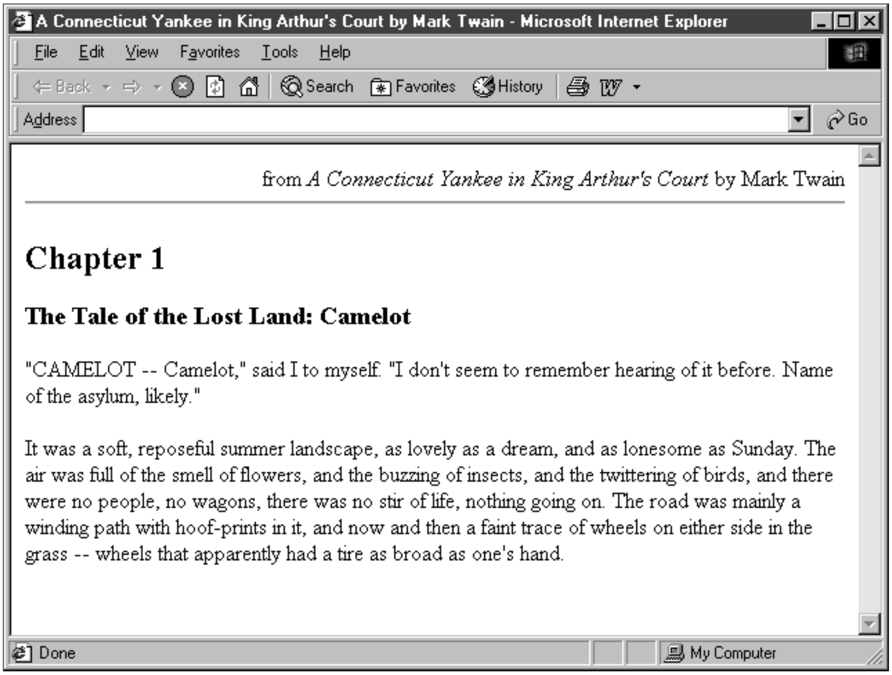
```
<STYLE TYPE="text/css">
P {FONT-FAMILY: ARIAL, HELVETICA, SANS-SERIF; FONT-
SIZE: 10pt; LINE-HEIGHT: 20pt; MARGIN-LEFT: 20px;
MARGIN-RIGHT: 20px}
</STYLE>
```

The same rule is easier to read using indenting and alignment:

```
<STYLE TYPE="text/css">
P     {
      FONT-FAMILY: ARIAL, HELVETICA, SANS-SERIF;
      FONT-SIZE: 10pt;
      LINE-HEIGHT: 20pt;
      MARGIN-LEFT: 20px;
      MARGIN-RIGHT: 20px
      }
</STYLE>
```

STYLING WITH CSS

In this section you will see how to set up a style sheet for a document using a variety of font properties. For example, your job is to develop an online library of public domain texts. You would want to set up a style sheet that you could apply to all the documents in the collection. In this example, the public domain content is the first chapter from Mark Twain's *A Connecticut Yankee in King Arthur's Court*. Figure 6-17 shows the page coded with standard HTML. The code for the page follows the figure.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from *A Connecticut Yankee in King Arthur's Court* by Mark Twain

Chapter 1

The Tale of the Lost Land: Camelot

"CAMELOT -- Camelot," said I to myself. "I don't seem to remember hearing of it before. Name of the asylum, likely."

It was a soft, reposeful summer landscape, as lovely as a dream, and as lonesome as Sunday. The air was full of the smell of flowers, and the buzzing of insects, and the twittering of birds, and there were no people, no wagons, there was no stir of life, nothing going on. The road was mainly a winding path with hoof-prints in it, and now and then a faint trace of wheels on either side in the grass -- wheels that apparently had a tire as broad as one's hand.

FIGURE 6-17
Standard HTML text display

```
<HTML>
<HEAD>
<TITLE>A Connecticut Yankee in King Arthur's Court by
Mark Twain</TITLE>
</HEAD>
<BODY>
<DIV ALIGN=RIGHT>
from <I>A Connecticut Yankee in King Arthur's Court</I> by
Mark Twain</DIV>
<HR>
<H2>Chapter 1</H2>
<H3>The Tale of the Lost Land: Camelot</H3>
<P>
```

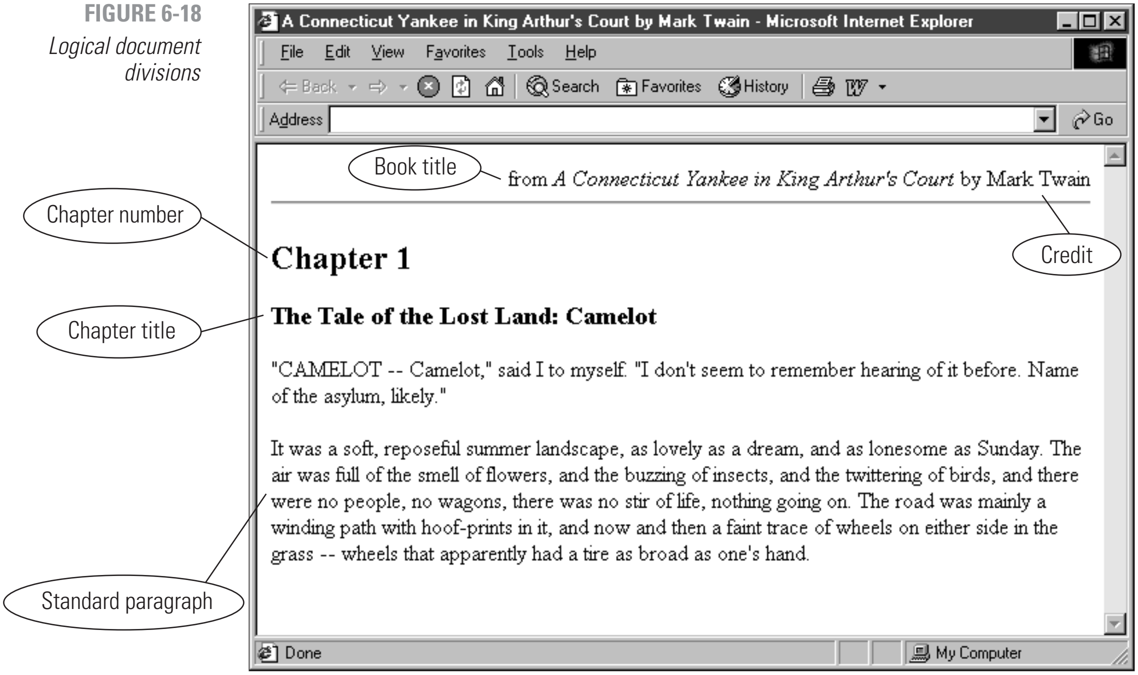
```
"CAMELOT —
 Camelot," said I to myself. "I don't seem to remember
hearing of it before. Name of the asylum, likely."
</P>
<P>
It was a soft, reposeful summer landscape, as lovely as a
dream, and as lonesome as Sunday. The air was full of the
smell of flowers, and the buzzing of insects, and the
twittering of birds, and there were no people, no wag-
ons, there was no stir of life, nothing going on. The
road was mainly a winding path with hoof-prints in it,
and now and then a faint trace of wheels on either side in
the grass — wheels that apparently had a tire as broad as
one's hand.
</P>
</BODY>
</HTML>
```

SETTING UP DOCUMENT DIVISIONS

To set up a style sheet, start by determining the logical divisions for the document. Each division has its own unique type characteristics that can be stated as style rules. Figure 6-18 shows the document divisions you could use for this type of document.

FIGURE 6-18

Logical document divisions



A Connecticut Yankee in King Arthur's Court by Mark Twain - Microsoft Internet Explorer

from *A Connecticut Yankee in King Arthur's Court* by Mark Twain

Chapter 1

The Tale of the Lost Land: Camelot

"CAMELOT -- Camelot," said I to myself. "I don't seem to remember hearing of it before. Name of the asylum, likely."

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Using style sheets, you can create a different set of style rules for each division. For this example, you can build the style sheet internally in the <STYLE> section. Later, you can move the rules to an external style sheet for use with multiple documents.

STYLING THE STANDARD PARAGRAPH

You can set up the style for the most basic content division—the standard paragraph. Here are the style requirements for the paragraph:

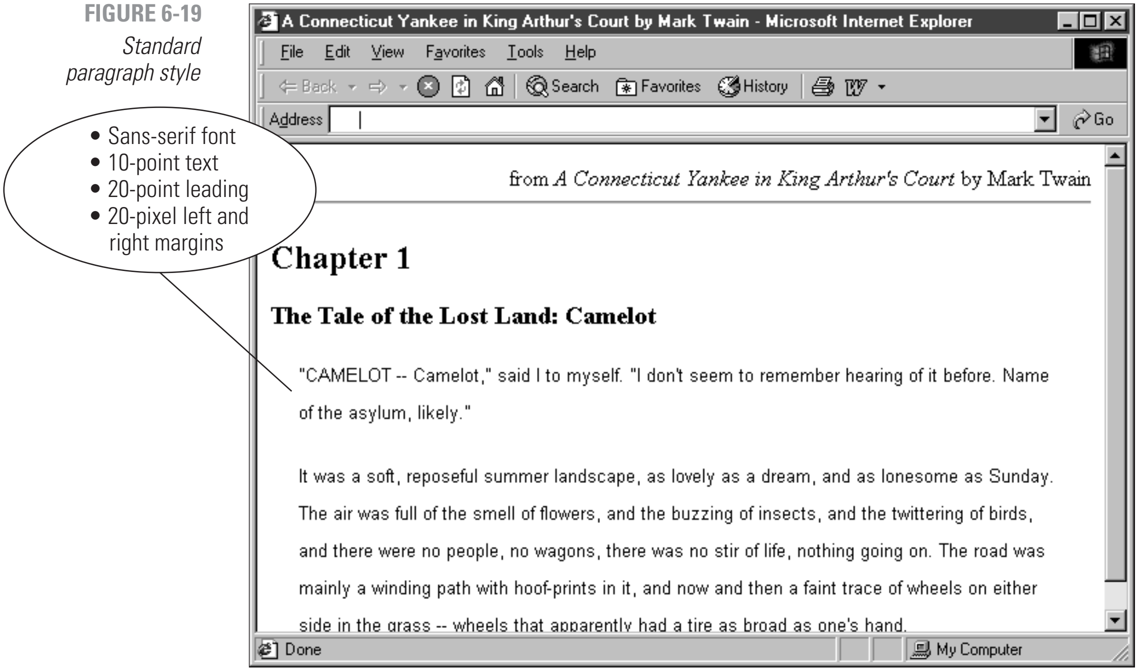
- Sans-serif font
- 10-point type with 20-point leading
- 20-pixel left and right margins

Select the <P> element and state the style rules:

```
P     {
      FONT-FAMILY: ARIAL, HELVETICA, SANS-SERIF;
      FONT-SIZE: 10pt;
      LINE-HEIGHT: 20pt;
      MARGIN-LEFT: 20px;
      MARGIN-RIGHT: 20px
```

Place all style rules within the <STYLE> element in the document's <HEAD> section. Figure 6-19 shows the results of the style changes to the <P> element.

FIGURE 6-19
Standard paragraph style



- Sans-serif font
- 10-point text
- 20-point leading
- 20-pixel left and right margins

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from *A Connecticut Yankee in King Arthur's Court* by Mark Twain

Chapter 1

The Tale of the Lost Land: Camelot

"CAMELOT -- Camelot," said I to myself. "I don't seem to remember hearing of it before. Name of the asylum, likely."

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STYLING THE CHAPTER NUMBER

Set up a class name for the chapter number. Call this class CHAPNUMBER. Here are the style characteristics for the class:

- Default browser font
- White text on a gray background
- 24-point bold text with 36-point leading
- 20-pixel left margin

Specify the class name and state the rule:

```
.CHAPNUMBER
     {
     FONT-SIZE: 24pt;
     LINE-HEIGHT: 36pt;
     FONT-WEIGHT: BOLD
     MARGIN-LEFT: 20px;
     BACKGROUND-COLOR: GRAY;
     COLOR: WHITE;
     }
```

Change the element that contains the chapter number to apply the new style. The code currently looks like this:

```
<H2>Chapter 1</H2>
```

Replace the <H2> with <DIV>, and specify the CLASS attribute value as CHAPNUMBER:

```
<DIV CLASS="CHAPNUMBER">Chapter 1</DIV>
```

Figure 6-20 shows the results of the new style.

STYLING THE CHAPTER TITLE

Call the chapter title class CHAPTITLE. Here are the style characteristics:

- Default browser font
- 18-point bold text with 30-point leading
- 2 points of spacing between each letter
- 20-pixel left margin

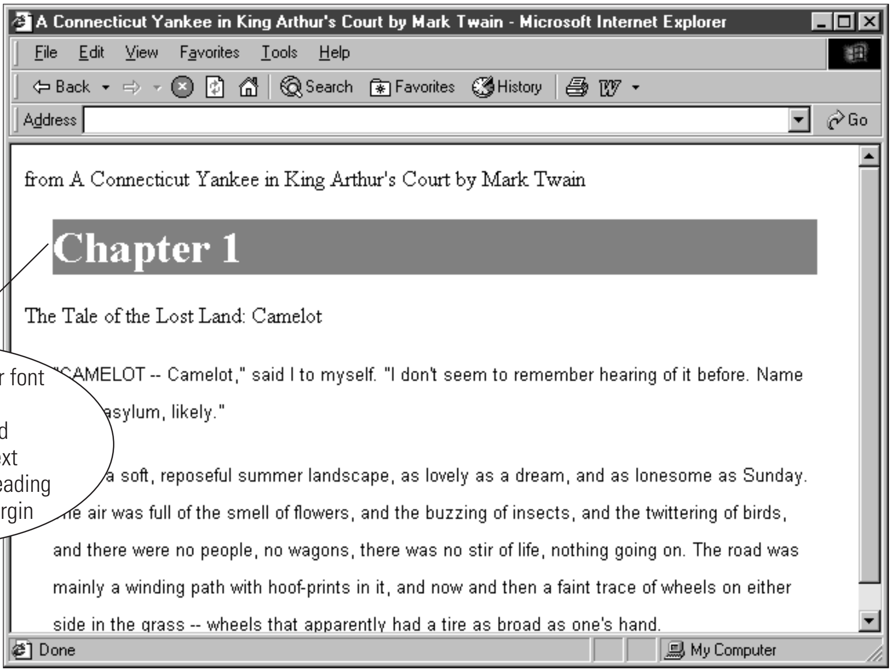
Specify the class name and state the rule:

```
.CHAPTITLE
     {
     FONT-SIZE: 18pt;
     LINE-HEIGHT: 30pt;
     FONT-WEIGHT: BOLD;
     LETTER-SPACING: 2pt
     MARGIN-LEFT: 20px;
     }
```

Apply the style in the code:

```
<DIV CLASS="CHAPTITLE">The Tale of the Lost Land:
Camelot</DIV>
```

FIGURE 6-20
Chapter number style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from A Connecticut Yankee in King Arthur's Court by Mark Twain

Chapter 1

The Tale of the Lost Land: Camelot

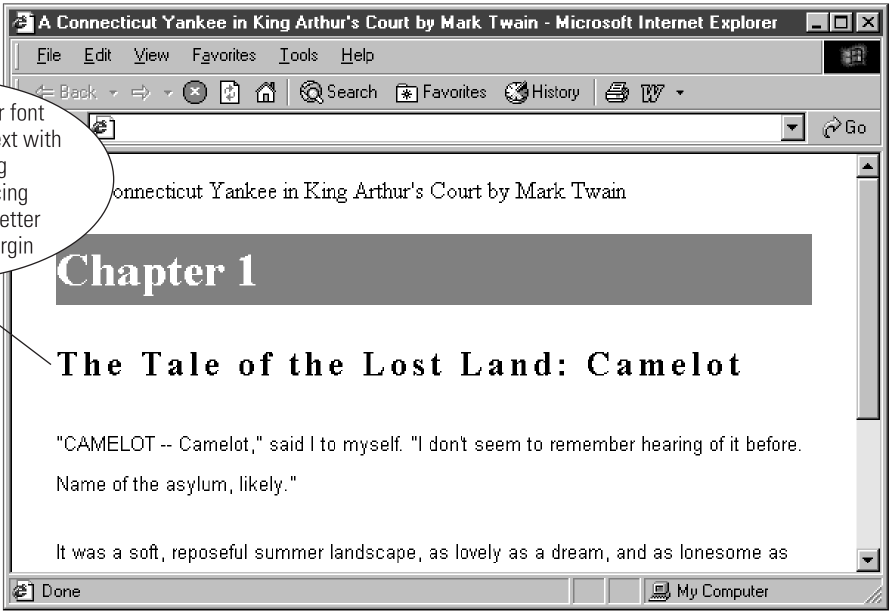
"CAMELOT -- Camelot," said I to myself. "I don't seem to remember hearing of it before. Name of the asylum, likely."

It was a soft, reposeful summer landscape, as lovely as a dream, and as lonesome as Sunday. The air was full of the smell of flowers, and the buzzing of insects, and the twittering of birds, and there were no people, no wagons, there was no stir of life, nothing going on. The road was mainly a winding path with hoof-prints in it, and now and then a faint trace of wheels on either side in the grass -- wheels that apparently had a tire as broad as one's hand.

- Default browser font
- White text on a gray background
- 24-point bold text with 36-point leading
- 20-pixel left margin

Figure 6-21 shows the results of the new style.

FIGURE 6-21
Chapter title style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from A Connecticut Yankee in King Arthur's Court by Mark Twain

Chapter 1

The Tale of the Lost Land: Camelot

"CAMELOT -- Camelot," said I to myself. "I don't seem to remember hearing of it before. Name of the asylum, likely."

It was a soft, reposeful summer landscape, as lovely as a dream, and as lonesome as

- Default browser font
- 18-point bold text with 30-point leading
- 2 points of spacing between each letter
- 20-pixel left margin

STYLING THE CREDIT AND BOOK TITLE

Finish the document style sheet by setting up classes for the credit and book title. The credit is a block element and, therefore, a <DIV>. Here are the style requirements:

- Default font
- 10-point type on 20-point leading
- Right-aligned
- Black bottom border rule
- 20-pixel left margin

State the style rule for class CREDIT:

```
DIV.CREDIT {
     TEXT-ALIGN: RIGHT;
     FONT-SIZE: 10pt;
     BORDER-BOTTOM: SOLID 1px BLACK;
     LINE-HEIGHT: 20pt;
     MARGIN-LEFT: 20px;
     }
```

Apply the style:

```
<DIV CLASS="CREDIT">from A Connecticut Yankee in King
Arthur's Court by Mark Twain</DIV>
```

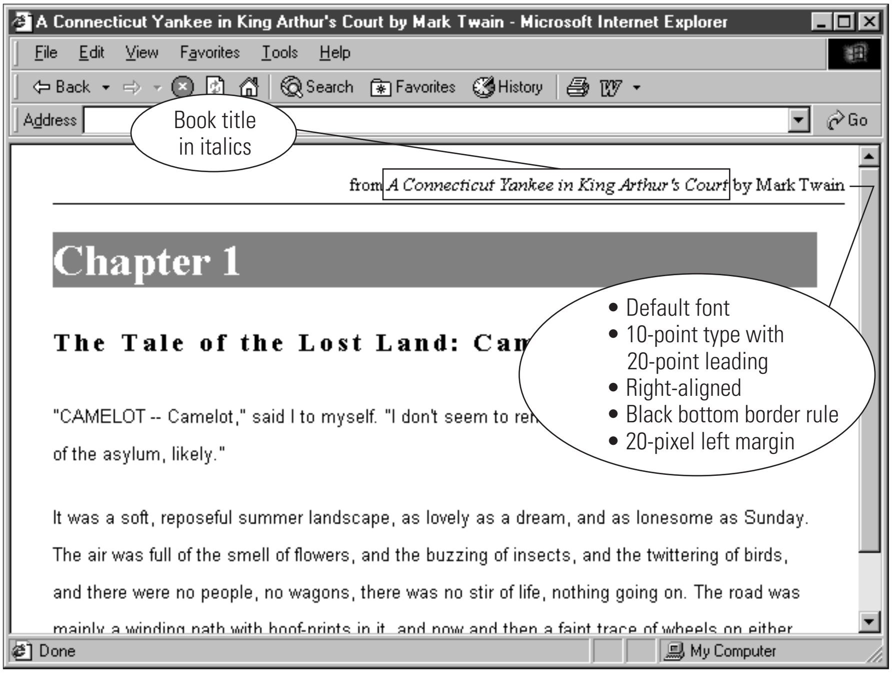
The book title is contained within a line of text. Use the inline <SPAN> element to apply a style to the book title. First, set up the style rule which makes the text italic:

```
SPAN.BOOKTITLE {FONT-STYLE: ITALIC}
```

Then apply the class using <SPAN>:

```
<DIV CLASS="CREDIT">from <SPAN CLASS="BOOKTITLE">A
Connecticut Yankee in King Arthur's Court</SPAN> by Mark
Twain</DIV>
```

Figure 6-22 shows the results of the final style changes—the finished styled document.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from *A Connecticut Yankee in King Arthur's Court* by Mark Twain

Chapter 1

The Tale of the Lost Land: Cam

"CAMELOT -- Camelot," said I to myself. "I don't seem to re

of the asylum, likely."

It was a soft, reposeful summer landscape, as lovely as a dream, and as lonesome as Sunday. The air was full of the smell of flowers, and the buzzing of insects, and the twittering of birds, and there were no people, no wagons, there was no stir of life, nothing going on. The road was mainly a winding path with hoof-prints in it, and now and then a faint trace of wheels on either

Book title in italics

- Default font
- 10-point type with 20-point leading
- Right-aligned
- Black bottom border rule
- 20-pixel left margin

FIGURE 6-22
Credit and book title style

The code for the entire document follows:

```
<HTML>
<HEAD>
<TITLE>A Connecticut Yankee in King Arthur's Court by
Mark Twain</TITLE>
</HEAD>
<STYLE TYPE="text/css">
P     {
      FONT-FAMILY: ARIAL, HELVETICA, SANS-SERIF;
      FONT-SIZE: 10pt;
      LINE-HEIGHT: 20pt;
      MARGIN-LEFT: 20px;
      MARGIN-RIGHT: 20px
      }
DIV.CHAPNUMBER
      {
      FONT-SIZE: 24pt;
      LINE-HEIGHT: 30pt;
      MARGIN-LEFT: 20px;
      BACKGROUND-COLOR: GRAY;
      COLOR: WHITE;
      FONT-WEIGHT: BOLD
      }
DIV.CHAPTITLE
      {
      FONT-SIZE: 18pt;
      LINE-HEIGHT: 30pt;
      FONT-WEIGHT: BOLD;
      MARGIN-LEFT: 20px;
      LETTER-SPACING: 2pt
      }
DIV.CREDIT
      {
      TEXT-ALIGN: RIGHT;
      FONT-SIZE: 10pt;
      LINE-HEIGHT: 20pt;
      BORDER-BOTTOM: SOLID THIN BLACK;
      MARGIN-LEFT: 20px;
      }
SPAN.BOOKTITLE {FONT-STYLE: ITALIC}
</STYLE>
<BODY>
<DIV CLASS="CREDIT">from <SPAN CLASS="BOOKTITLE">A
Connecticut Yankee in King Arthur's Court</SPAN> by Mark
Twain</DIV>
<DIV CLASS="CHAPNUMBER">Chapter 1</DIV>
<DIV CLASS="CHAPTITLE">The Tale of the Lost Land:
Camelot</DIV>
<P>
"CAMELOT — Camelot," said I to myself. "I don't seem to
remember hearing of it before. Name of the asylum,
likely."  </P>
<P>
It was a soft, reposeful summer landscape, as lovely as a
dream, and as lonesome as Sunday. The air was full of the
smell of flowers, and the buzzing of insects, and the
twittering of birds, and there were no people, no wag-
ons, there was no stir of life, nothing going on. The road
was mainly a winding path with hoof-prints in it, and now
and then a faint trace of wheels on either side in the
grass — wheels that apparently had a tire as broad as
one's hand.
</P>
</BODY>
</HTML>
```

SUMMARY & REVIEW

- Use type to communicate information structure. Be sparing with your type choices; use fonts consistently, and design for legibility.
- Remember that HTML text downloads faster than graphics-based text. Use HTML text whenever possible.
- Use browser-safe fonts that will appear as consistently as possible across operating systems.
- Limit the use of the <FONT> element because it is deprecated in HTML 4.0.
- Experiment and consider implementing with Cascading Style Sheets (CSS). CSS eventually will replace the <FONT> element and offer more control and ease of use.
- If you use CSS, standardize your styles by building external style sheets and linking multiple documents to them.
- Test your work. Different browsers and computing platforms render text in different sizes.

REVIEW QUESTIONS

1. What is the default browser font?
2. What does the browser do if you specify a font that is not stored on a user's computer?
3. What are two drawbacks to graphics-based text?
4. What three attributes can you use with the <FONT> element?
5. Why would you want to limit use of the <FONT> element?
6. What are the two ways to set size with the <FONT> element?
7. Why is FACE="ARIAL, HELVETICA" a common font substitution string?
8. Name the two parts of a style rule.
9. Name the two parts of a property declaration.
10. What element contains the style rules?
11. How do you override a style for a specific element?
12. What is the common filename extension for style sheets?
13. Name three ways to select elements.
14. Name two elements designed for use with style sheets.
15. Write a rule specifying that <P> elements appear as 14-point text with 20-point leading.
16. Write a rule specifying that <I> elements display red only when they appear within <P> elements.
17. Write a rule defining a division named NOTE. Specify 12-point bold Arial text on a yellow background.
18. What three white space areas can you affect with style rules?
19. Write a style rule to create a white on black reverse <H1> heading.
20. Write a style rule for a <P> element with a 24-point hanging indent and a 30-pixel margin on the left and right sides.

PROJECTS

1. Convert an existing HTML document to Cascading Style Sheets.
   a. Build styles using the existing standard HTML elements in the file.
   b. Test the work in multiple browsers to verify that all styles are portable.
   c. Remove the files and place them in an external style sheet.
   d. Link the HTML file to the style sheet. Test to make sure the file displays properly.
2. Convert an existing document to Cascading Style Sheets.
   a. Decide on logical divisions for the document.
   b. Give the divisions class names.
   c. Write style rules for the division.
   d. Apply the styles to the divisions using <DIV> or <SPAN>.
   e. Test your work.
3. Convert an existing document to Cascading Style Sheets. Test your work in an older browser, such as Netscape Navigator 3.0, which does not support style sheets. You can download older versions of browsers from *www.browsers.com*.
4. Browse the Web for examples of good typography. Write a short design critique of why the type works effectively on the Web sites you find.
5. Browse the Web for examples of poor typography. Write a short design critique of why the type is confusing or misleading to the user.
6. Mock up a page for testing body text fonts. Try a variety of fonts at different resolutions to determine which is the most readable. Test your work on a variety of subjects (friends, family, coworkers) to see if they agree with your choices.
7. You will find the example files from this chapter on the *Principles of Web Design* Companion Web site.
   a. Open the file twain.htm in your browser. Save the file to your hard drive.
   b. Re-create the style rule demonstration in the “Styling with CSS” section of this chapter after Figure 6-22.
   c. Test the finished file’s compatibility by viewing it in multiple browsers.

CASE STUDY

Use Cascading Style Sheets for the case study project. Design the type hierarchy for the information levels in your Web site. Create a type specification page in HTML that shows examples of the different typefaces and sizes and where each of them will be used.

Determine the body copy typeface and size for your Web site. Mock up a couple of test pages with some content. Test for legibility of your text. Try different leading, padding, and margins to see how this affects the clarity of the text.

Once you have decided on your typefaces, start to add actual content to the different pages of the Web site using the styles you have developed to display the text.